Attorney Docket No.: P-6114-ÚS



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):

ZIPPER, Eliav

Examiner:

Not yet known

Serial No.:

10/736,741

Group Art Unit:

2681

Filed:

December 17, 2003

Title:

RADIO FREQUENCY MODULATOR AND METHODS THEREOF

Mail Stop Amendment Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

Sir:

## INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 C.F.R. §§1.56, 1.97 and 1.98, this Information Disclosure Statement includes Form PTO-1449:

1. 🖂	listing documents including patents, publications and other information for consideration
	by the Examiner, however, since the subject application was filed after June 30, 2003,
	copies of United States patents, and/or United States patent applications, and/or United
	States patent application publications are not included in this information disclosure
	statement; and/or
2. 🗌	listing documents including patents, publications and other information that have been
	previously cited or submitted to the Patent Office in prior application U.S. Serial No.
	, filed which is properly identified and relied on for an earlier effective
	filing date under 35 U.S.C. 120 for consideration by the Examiner; however, in accordance
	with 37 C.F.R. 1.98(d), copies of such documents are not included in this information
	disclosure statement; and/or
3. 🖂	listing documents including patents, publications, and other information for consideration

by the Examiner, copies of which are included with this information disclosure statement;

APPLICANTS: SERIAL NO.: ZIPPER, Eliav 10/736,741

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4. Isting other information for the Examiner's consideration which was cited in a communication from a foreign patent office in a counterpart foreign application, a copy of which is included with this information disclosure statement.

The information herein cited is only in fulfillment of Applicant(s) duty of candor in disclosing all information brought to Applicant(s) attention. This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art". If it should be determined that any of the listed documents do not constitute "prior art" under United States law, Applicant(s) reserve the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant(s) further reserve(s) the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

In accordance with MPEP Sections 609 and 707.05(b), it is requested that each and every document cited (including any cited in applicant's specification which is not repeated on the attached Form PTO-1449) be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing on Form PTO-1449. Such initialing is requested even if the Examiner does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application and is evidence that the Examiner has considered the document.

This Information Disclosure Statement is being filed:

I) Within three (3) months of filing the subject Application or entry of the
subject Application into the national stage or before mailing of the first Office Action on
the merits of the subject Application or a request for continued examination thereof,
whichever event occurs last pursuant to of 37 C.F.R §1.97 (b); or
II) After the period specified in (I) but before the mailing date of either a final
Official Action under 37 C.F.R §1.113 or a notice of allowance under 37 C.F.R §1.311
whichever occurs first and;
1.
the Form PTO-1449 was either (i) cited in a communication from a foreign patent
office in a counterpart foreign application not more than three (3) months prior to

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ZIPPER, Eliav 10/736,741

05-0649.

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Page 3

the filing of this Information Disclosure Statement or (ii) not cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, not

	know	to any individual designated in §1.56(c) more than three (3) months prior to
	the fil	ng of this information disclosure statement; or
	2.	the undersigned hereby authorizes the Patent Office to charge the fee
	in the	amount of \$180.00 under 37 C.F.R §1.17 (p) to Deposit Account 05-0649.
III)		After the period in (I) and (II) but before the payment of the issue fee and,
	1.	The undersigned hereby states:
		a)
		was cited in a communication from a foreign Patent Office in a counterpart
		foreign application not more than three (3) months prior to the filing of this
		Information Disclosure Statement; or
		b)
		was cited in a communication from a foreign patent office in a counterpart
		foreign application, and to the knowledge of the undersigned after making
		reasonable inquiry, no item of information contained in this Information
		Disclosure Statement was known to any individual designated in 37 C.F.R. §
		1.56(c) more than three months prior to the filing of this Information
		Disclosure Statement; and
	2.	The undersigned hereby authorizes the Patent Office to charge the
	Petitio	n fee in the Amount of \$180.00 under 37 C.F.R §1.17 (p) to Deposit Account

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ZIPPER, Eliav 10/736,741

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December 17, 2003

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**Except** for issue fees payable under 37 C.F.R. §1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 05-0649.

Respectfully submitted,

Mark S. Cohen

Attorney for Applicant(s) Registration No. 42,425

Dated: October 17, 2004

Eitan, Pearl, Latzer & Cohen Zedek, LLP.

10 Rockefeller Plaza, Suite 1001 New York, New York 10020

Tel: (212) 632-3480 Fax: (212) 632-3490

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Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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	Substitute	for form	1449A/PTO	Com	plete if Known	
				Application Number	10/736,741	
INF	ORMA	TION	DISCLOSURE	Filing Date	December 17,	200201PE
STA	ATEME	NT B	Y APPLICANT	First Named Inventor	ZIPPER, Eliav	( 6)
				Group Art Unit	2681	OCT 2 0 2004
(	use as ma	ny she	ets as necessary)	Examiner Name	Not yet know	
Sheet	1	of	4	Attorney Docket Number	P-6114-US	(A)

				S. PATENT DOCUMENTS		MADERI
				S. PATENT DUCUMENTS		
Examiner Initials*	Cite No. 1	U.S. Pater Number	nt Document  Kind Code <sup>2</sup> (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A	5,012,200		Meinzer	04-30-1991	
	В	5,862,460		Rich	01-19-1999	
	С	5,903,854		Abe et al.	05-11-1999	
	D	6,330,455		Ichihara	12-11-2001	
	E	5,302,914		Arntz et al.	04-12-1994	
	F	6,285,251		Dent et al.	09-04-2001	
	G	5,694,093		DaSilva et al.	12-02-1997	
	н	5,854,571		Pinckley et al.	12-29-1998	·
	ı	5,872,481		Sevic et al.	02-16-1999	
	J	6,133,788		Dent	10-17-2000	
	κ	6,201,452		Dent et al.	03-13-2001	
	L	5,345,189		Hornak et al.	09-06-1994	
	м	5,264,807		Okubo et al.	11-23-1993	
	N	5,909,643		Aihara	06-01-1999	· · · · · · · · · · · · · · · · · · ·
	0	5,929,702		Myers et al.	09-27-1999	
	Р	5,758,269		Wu	05-26-1998	
	Q	5,786,727		Sigmon	07-28-1998	
	R	5,886,575		Long	03-23-1999	
	s	5,880,633		Leizerovich et al.	03-09-1999	
	T	5,739,723		Sigmon et al.	04-14-1998	

				FORE	IGN PATENT DOCUM	ENTS			
Examiner Initials*	Cite No. 1		gnPatent Docui Kind Number⁴ <i>(if kn</i>		Name of Patentee or Applicant of Cited Document	Cited [	Publication of Document DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	⊤º
	U	wo	99/52206		Dent	10-14-1999			
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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

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Substitute for form 1449A/PTO	Com	plete if Known
	Application Number	10/736,741
INFORMATION DISCLOSURE	Filing Date	December 17, 2003
STATEMENT BY APPLICANT	First Named Inventor	ZIPPER, Eliav
	Group Art Unit	2681
(use as many sheets as necessary)	Examiner Name	Not yet known
Sheet <sup>2</sup> of <sup>4</sup>	Attorney Docket Number	P-6114-US

		U.	S. PATENT DOCUMENTS		
Examiner nitials*	Cite No.1 Number Kind Code <sup>2</sup> (if known)		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	v	5,872,481	Sevic et al.	02-16-1999	
	w	5,661,434	Brozovich et al.	08-26-1997	
	x	5,420,541	Upton et al.	05-30-1995	
	Υ	5,568,094	Bowen et al.	10-22-1996	
	z	5,548,246	Tamamoto et al.	08-20-1996	
	AA	5,541,554	Stengel et al.	07-30-1996	
	AB	5,724,005	Chen et al.	03-03-1998	
	AC	4,439,744	Kumar et al.	03-27-1984	
	AD	5,621,351	Puri et al.	04-15-1997	
	AE	4,433,312	Kahn	02-21-1984	-ors
	AF	5,974,041	Kornfeld et al.	10-26-1999	
	AG	3,777,275	Cox	12-04-1973	
	АН	6,587,511	Barak et al.	07-01-2003	
	Al	5,901,346	Stengel et al	05-04-1999	
	AJ	2003/0125065	Hasson et al.	07-03-2003	
	AK	09/579,528	Hasson, Jaime et al.	05-26-2000 (filing date)	
	AL	10/131,750	Barak et al.	04-24-2002 (filing date)	

				FURE	IGN PATENT DOCUME	CINIS	***	
		Foreig	nPatent Do	cument	Name of Patentee or	Date of Publication of		
Examiner Initials*	Cite No.1	Office <sup>3</sup> 1	Number <sup>4</sup> (if	nd Code⁵ <i>known)</i>	Applicant of Cited Document	Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	7
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Complete if Known Substitute for form 1449B/PTO **Application Number** 10/736,741 INFORMATION DISCLOSURE Filing Date December 17, 2003 STATEMENT BY APPLICANT **First Named Inventor** ZIPPER, Eliav Group Art Unit 2681 (use as many sheets as necessary) **Examiner Name** Not yet known Sheet Attorney Docket Number P-6114-US

		NON PATENT LITERATURE DOCU	MENTS				
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), publisher, city and/or country where	date, page(s), vo		T <sup>2</sup>		
	AM	FREDRICK H. RAAB, "Efficiency of Outphasing RF Power-Amplifier S	systems", IEEE Trai	nsactions on			
		Communications. Vol. Com-33, No. 10, Oct 1985, pp. 1094-1099					
	AN	STEVE C. CRIPPS, "RF Power Amplifiers for Wireless Communication	ns", 1999, USA, pp.	219-250			
	AO	D.C. Cox, "Linear Amplification with Nonlinear Components", IEEE To	ransaction on Com	munications, December			
		1974, pp.1942-1945.					
	АР	Bob Stengel and William R. Elsenstadt, "LINC Power Amplifier Combi	iner Method Efficie	ncy Optimization", IEEE			
		Transaction on Vehicular Technology. Vol.49, No. 1, January 2000, pp	o.229-234				
	AQ	Bob Stengel, "LINC Linear Transmitter Technology Review", Presente Boston, MA, June 11, 2000, pp.1-32.	ed at International f	Microwave Symposium,			
	AR	S.A. HETZEL et al., "A LINC Transmitter", University of Bristol, IEEE,	1999, pp. 133-137				
	AS S. O. Ampem-Darko, H.S. Al-Raweshidy, "A Novel Technique for Gain/Phase Error Cancellation in LINC Transmitters", 1999 IEEE , pp. 2034-2038						
Examin	er		Date				

<sup>\*</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	Substitu	ite for fo	orm 1449B/PTO	··	Complete if Known		
					Application Number	10/736,741	
INF	ORMA	1OIT	N DISCLOSU	JRE	Filing Date	December 17, 2003	
STA	ATEME	ENT I	BY APPLICA	ANT	First Named Inventor	ZIPPER, Eliav	
					Group Art Unit	2681	
(	use as m	any sh	eets as necessary	1)	Examiner Name	Not yet known	
Sheet	4	of	4		Attorney Docket Number	P-6114-US	

	NON PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>				
	АТ	T. A. D. Riley and M. A. Copeland, "A simplified continuous phase modulator technique," IEEE Trans. on					
		circults and systems, VOL. 41, NO. 5, pp. 321-328, May 1994.					
	AU	N. M. Filiol, T. A. D. Riley, C. Plett and M. A. Copeland, "An agile ISM band frequency synthesizer with built-in					
		GMSK data modulation," IEEE Journal of Solid-State Circuits, VOL. 33, NO. 7, pp.998-1008, July 1998.					
	AV	M. H. Perrot, T. L. Tewksbury III, C. G. Sodini, "A 27-mW CMOS Fractional-N Synthesizer Using Digital					
		Compensation for 2.5-Mb/s GFSK Modulation", IEEE Journal of Solid-State Circuits, VOL. 32, NO. 12, pp.2048-					
		2060, Dec 1997.					
Examin Signatu		Date Considered					

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